AMENDMENTS TO THE CLAIMS

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1.   (Previously Presented) A method of bi-directionally communicating between an application residing on a first processor on a private computer network and an application residing on a second processor not on the private computer network in order to allow for the delivery of unsolicited messages to be received from the second processor, the communication path including a public computer network and a proxy server coupled to the private computer network and separating the private computer network from the public computer network, the method comprising:

transmitting a first HTTP-based "request" from the first processor to the second processor for establishing a first communication channel between the first processor and the second processor through the proxy server to allow the transfer of first messages from the first processor to the second processor, and the delivery of first message delivery acknowledgments from the second processor to the first processor;

transmitting a first parked HTTP-based "request" from the first processor to be parked at the second processor for establishing a persistent communication channel between the first processor and the second processor through the proxy server to allow the transfer of second messages from the second processor to the first processor, and the delivery of second message delivery acknowledgments from the first processor to the second processor, and wherein the first HTTP-based "request" includes therein a request that the second processor transmit a reply after the expiration of a time period even if there are no messages to send to the first processor so that the first processor can assess a status of the connection thereto;

receiving a first HTTP-based "reply" from the second processor to the first processor in response to the first parked HTTP-based "request"; and

in response to receiving the first HTTP-based "reply", transmitting a second parked HTTP-based "request" via the proxy to the second processor, the second parked HTTP "request" including an acknowledgment to the first HTTP-based "reply" in order to maintain the persistent

HTTP-based connection between the first processor and the second processor through the proxy server, and wherein the second parked HTTP-based "request" includes therein a request that the second processor transmit a reply after the expiration of a time period even if there are no messages to send to the first processor in order to ensure persistent connectivity between the first and second processor.

2.   (Previously Presented) The method of claim 1, wherein the first HTTP-based "request" includes at least one of the first messages therein.

3.   (Canceled)

4.   (Previously Presented) The method of claim 1, wherein the first HTTP-based "reply" includes at least one of the second messages therein.

5.   (Canceled)

6.   (Previously Presented) The method of claim 1, wherein the first processor only receives the first HTTP-based "reply" from the second processor on the persistent communication channel when the second processor has at least one of the second messages to send to the first processor.

7.   (Canceled)

8.   (Previously Presented) The method of claim 1, further comprising setting the time period to be less than two days.

9.   (Previously Presented) The method of claim 1, further comprising setting the time period to be approximately five minutes.

10.   (Previously Presented) The method of claim 1, further comprising dynamically adjusting the time period based upon a connection time out closure controlled by the proxy server.

11.   (Original) The method of claim 10, wherein the dynamically adjusting of the time period comprises:

receiving a connection time out closure message from the proxy server;

determining a first time between transmitting the second HTTP-based "request" and receiving a connection time out closure message from the proxy server; and

calculating a new time period to be less than the first time and less than the time period.

12.   (Original) A computer-readable medium having computer-readable instructions for performing the method of claim 1.

13. (Previously Presented) A method of enabling transmission of unsolicited messages from a server to a client by ensuring that a persistent connection between the server and the client does not time out, wherein the client resides on a private computer network having a proxy server between the private computer network and a public computer network, and wherein the server transmits the unsolicited messages over the public computer network, the method comprising:

selecting by a client a connection time out period used in order to determine a time duration in which the client is to receive a "reply" message from a server in order to ensure persistent connectivity between the client and the server;

allowing the client to include the connection time out period in a parked HTTP-based "request" sent from the client to be parked at the server for requesting an HTTP-based "reply" from the server after the expiration of the connection time out period even if there are no messages to send to the client in order to avoid connection termination by the proxy server due to communication inactivity; and

transmitting the parked HTTP-based "request" to the server via the proxy server to open a persistent connection therewith.

14. (Canceled)

15. (Previously Presented) The method of claim 13, further comprising dynamically adjusting the connection time out period to avoid connection termination by the proxy server due to communication inactivity.

16. (Previously Presented) The method of claim 15, wherein the step of dynamically adjusting the connection time out period comprises:

receiving a connection time out closure message from the proxy server;

upon receiving the time out closure message from the proxy server, calculating a new time period from the transmitting of the HTTP-based "request" to the receiving of the connection time out closure message;

reducing the connection time out period to be less than the new time period and less than a current value of the connection time out period in order to create a new connection time out period;

including the new connection time out period in a second parked HTTP-based "request" for requesting an HTTP-based "reply" from the server after the expiration of the new connection time out period even if there are no messages to send to the client in order to avoid connection termination by the proxy server due to communication inactivity; and

transmitting the second parked HTTP-based "request" to the server via the proxy server to maintain the persistent connection therewith.

17. (Previously Presented) The method of claim 13, further comprising:

receiving a connection time out closure message from the proxy server indicating that the proxy server has closed the persistent connection;

calculating a connection time out period from the transmitting of the parked HTTP-based "request" to the receiving of the connection time out closure message; and

transmitting a second parked HTTP-based "request" to the server via the proxy server to open a persistent connection therewith, the second parked HTTP-based "request" requesting a reply from the server when the server has messages to send to the client and after the expiration of the connection time out period if there are no messages to send to the client.

18. (Previously Presented) The method of claim 17, further comprising:

receiving a second connection time out closure message from the proxy server;

reducing the connection time out period to form a new connection time out period shorter in duration than the connection time out period; and

transmitting a third parked HTTP-based "request" to the server via the proxy server to open a persistent connection therewith, the third parked HTTP-based "request" requesting a reply from the server when the server has messages to send to the client and after the expiration of the new connection time out period if there are no messages to send to the client.

19. (Original) A computer-readable medium having computer-readable instructions for performing the method of claim 13.

20.   (Previously Presented) A method of transmitting unsolicited HTTP-based messages via a public computer network to a client residing on a private computer network, the private computer network including a proxy server, the method comprising:

receiving an HTTP-based "request" originating from the client through the proxy server, wherein the HTTP-based "request" includes a first connection time out period used in order to determine a time duration in which the client is to receive a "reply" message in order to ensure persistent connectivity between the client and a server; and

parking the HTTP-based "request" without responding thereto unless a message is generated that needs to be transmitted to the client or unless the first connection time out period expires, the parking of the HTTP-based "request" establishing a persistent connection from the client through the proxy server; and

when the message is generated or the first connection time out period expires, generating an HTTP-based "reply" to the HTTP-based "request" parked for the client, the HTTP-based "reply" containing the message therein;

transmitting the HTTP-based "reply";

receiving a second HTTP-based "request" including a message acknowledgment from the client through the proxy server acknowledging the receipt of the HTTP-based "reply" and also including a second connection time out period; and

parking the second HTTP-based request without responding thereto unless a message is generated that needs to be transmitted to the client or unless the second connection time out period expires, the parking the second HTTP-based request maintaining the persistent connection from the client through the proxy server.

21.   (Canceled)

22.   (Previously Presented) The method of claim 20, wherein the second connection time out period is different than the first connection time out period.

23.   (Original) A computer-readable medium having computer-executable instructions for performing the method of claim 20.